# CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

**NABL** - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377


Job No.: CTCE/BBMP/WNo.15/KRIDL/CSR-06/080b/CEMENT/2016-17 Date: 02.07.2016

## TEST REPORT ON CEMENT

| | | |
|---|---|---|
| * CUSTOMER | : | **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore. |
| *AGENCY | : | **Technical Manager (West),** KRIDL, Bangalore. |
| *NAME OF THE WORK | : | Reserve fund for Emergency work in Dasarahalli Ward No. 15, (Improvements to Prayer ground to Govt. High School near Kalahasthinagar in Ward No. 15 in T. Dasarahalli Sub Division), BBMP, Bangalore. |
| REFERENCE | : | BBMP/DZ/AEE/TDSD/PR/2016-17 Dated: 30.06.2016 |
| SAMPLE ID | : | Cement |
| SAMPLE RECEIVED ON | : | 30.06.2016 |
| PERIOD OF TESTING | : | 30.06.2016 to 02.07.2016 |

The results of the tests conducted on the cement sample are as follows:

| Sl. No | Descriptions | Test Method as per IS | Test Result | Requirements as per IS: 8112-2013 |
|---|---|---|---|---|
| 1 | Standard Consistency | IS-4031 (Part -4) 1988(RA-2009) | 29.00 % | - |
| 2 | a) Initial Setting Time | IS-4031 (Part -5) 1988(RA-2009) | 140 Minutes | Not Less than 30 Minutes |
| | b) Final Setting Time | IS-4031 (Part -5) 1988(RA-2009) | 465 Minutes | Not More than 600 Minutes |
| 3 | Soundness by Le Chartlier Method | IS-4031 (Part-3) 1988(RA-2009) | 1 mm | Not more than 10mm |

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Quality Manager

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T-2377


Job No.: CTCE/BBMP/WNo.15/KRIDL/CSR-06/080b/SAND-Gradation/2016-17 : 02.07.2016

## TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

*** Agency** : **Technical Manager (West),** KRIDL, Bangalore.

*** Name of Work** : Reserve fund for Emergency work in Dasarahalli Ward No. 15, (Improvements to Prayer ground to Govt. High School near Kalahasthinagar in Ward No. 15 in T. Dasarahalli Sub Division), BBMP, Bangalore.

**Reference** : BBMP/DZ/AEE/TDSD/PR/2016-17 Dated: 30.06.2016

**Technical Reference** : IS : 2386 Part 1 - 1963 RA-2007

**Sample ID** : Fine Aggregates

**Sample Received on** : 30.06.2016

**Date of Testing** : 02.07.2016

Total Wt. of Aggregates in gms **1000**

| Is Sieve Size in mm | Cumulative Weight Passing in % | Spec.Limits as per IS 383-1970 (RA- 2007) | | | |
|---|---|---|---|---|---|
| | | Zone-I | Zone-II | Zone-III | Zone-IV |
| 10 | 100 | 100 | 100 | 100 | 100 |
| 4.75 | 92.16 | 90-100 | 90-100 | 90-100 | 95-100 |
| 2.36 | 77.84 | 60-95 | 75-100 | 85-100 | 95-100 |
| 1.18 | 58.26 | 30-70 | 55-90 | 75-100 | 90-100 |
| 600 Micron | 37.91 | 15-34 | 35-59 | 60-79 | 80-100 |
| 300 Micron | 12.44 | 5-20 | 8-30 | 12-40 | 15-50 |
| 150 Micron | 1.88 | 0-10 | 0-10 | 0-10 | 0-15 |

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**Remarks :** This sample is under Zone-II specific limits.

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Job No.: CTCE/BBMP/WNo.15/KRIDL/CSR-06/080b/AGG/GR/2016-17 : 02.07.2016

## TEST REPORT ON COARSE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

*** Agency** : **Technical Manager (West),** KRIDL, Bangalore.

*** Name of Work** : Reserve fund for Emergency work in Dasarahalli Ward No. 15, (Improvements to Prayer ground to Govt. High School near Kalahasthinagar in Ward No. 15 in T. Dasarahalli Sub Division), BBMP, Bangalore.

**Reference** : BBMP/DZ/AEE/TDSD/PR/2016-17 Dated: 30.06.2016

**Technical Reference** : IS : 2386 Part 1 -1963 RA-2007

**Sample ID** : Coarse Aggregates (20mm)

**Sample Received on** : 30.06.2016

**Date of Testing** : 02.07.2016

Total Wt. of Aggregates in gms= **5000**

| Is Sieve Size in mm | Cumulative Weight Passing in % | Spec.Limits as per IS 383-1970 (RA- 2007) | |
|---|---|---|---|
| | | Graded | Single Sized |
| 40 | 100 | 100 | 100 |
| 20 | 96.66 | 95-100 | 85-100 |
| 10 | 30.74 | 25-55 | 0-20 |
| 4.75 | 2.86 | 0-10 | 0-5 |

* Information is furnished by the Customer/Representative

**Remarks :** This sample is under Graded specific limits

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# CIVIL-TECH CONSULTANTS AND ENGINEERS

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Job No.: CTCE/BBMP/WNo.15/KRIDL /STEEL/2016-17 04.07.2016

## TEST REPORT ON REINFORCEMENT STEEL

| | | |
|---|---|---|
| Customer | : | **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore. |
| Agency | : | **Technical Manager (West),** KRIDL, Bangalore. |
| Name of the Work | : | Reserve fund for Emergency work in Dasarahalli Ward No. 15, (Improvements to Prayer ground to Govt. High School near Kalahasthinagar in Ward No. 15 in T. Dasarahalli Sub Division), BBMP, Bangalore. |
| Reference | : | BBMP/DZ/AEE/TDSD/PR/2016-17 Dated: 30.06.2016 |
| Date of Test | : | 04.07.2016 |
| Technical Reference | : | IS: 1786-2008 |

| Sl. No | Nominal size (dia) (mm) | Mass per metre (Kg/mtr) | TENSILE STRENGTH | | | Bend Test | Rebend Test |
|---|---|---|---|---|---|---|---|
| | | | 0.20% proof stress/Yield stress N/mm$^2$ | Tensile strength (Ultimate stress) N/mm$^2$ | Elongation percent gauge length | | |
| 1 | 8 | 0.40 | 510 | 552 | 13.05 | O.K | O.K |

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ಬೆಂಗಳೂರು

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JAS-ANZ BSCIC ISO 9001 REGISTERED


Job No.: CTCE/BBMP/WNo.15/KRIDL /STEEL/2016-17 04.07.2016

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|---|---|---|
| Customer | : | **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore. |
| Agency | : | **Technical Manager (West),** KRIDL, Bangalore. |
| Name of the Work | : | Reserve fund for Emergency work in Dasarahalli Ward No. 15, (Improvements to Prayer ground to Govt. High School near Kalahasthinagar in Ward No. 15 in T. Dasarahalli Sub Division), BBMP, Bangalore. |
| Reference | : | BBMP/DZ/AEE/TDSD/PR/2016-17 Dated: 30.06.2016 |
| Date of Test | : | 04.07.2016 |
| Technical Reference | : | IS: 1786-2008 |

| Sl. No | Nominal size (dia) (mm) | Mass per metre (Kg/mtr) | TENSILE STRENGTH | | | Bend Test | Rebend Test |
|---|---|---|---|---|---|---|---|
| | | | 0.20% proof stress/Yield stress $N/mm^2$ | Tensile strength (Ultimate stress) $N/mm^2$ | Elongation percent gauge length | | |
| 1 | 10 | 0.62 | 513 | 556 | 13.20 | O.K | O.K |

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T-2377


Job No.: CTCE/BBMP/WNo.15/KRIDL/CSR-06/080b/CUBE/2016-17 02.08.2016

## TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

*** Customer** : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

*** Agency** : **Technical Manager (West),** KRIDL, Bangalore.

*** Name of the work** : Reserve fund for Emergency work in Dasarahalli Ward No. 15, (Improvements to Prayer ground to Govt. High School near Kalahasthinagar in Ward No. 15 in T. Dasarahalli Sub Division), BBMP, Bangalore.

**Reference** : BBMP/DZ/AEE/TDSD/PR/2016-17 Dated: 30.06.2016

*** Sample ID** : Cement Concrete

**Size of cubes** : 150mmx150mmx150mm

**Cross Sectional Area** : 22500 $mm^2$

**Technical Reference** : IS: 516-1959 (Reaffirmed 2008)

*** Grade of Concrete** : $M_{30}$

**Compressive Strength as on** : $28^{th}$ day

**Sample Received on** : 02.08.2016

| Sl.No. | * Date of casting | Date of testing | Weight of cube (Kg) | Failure load (KN) | Compressive strength ($N/mm^2$) |
|---|---|---|---|---|---|
| 1 | 05.07.2016 | 02.08.2016 | 8.142 | 702.5 | 31.22 |
| 2 | 05.07.2016 | 02.08.2016 | 8.314 | 718.0 | 31.91 |
| 3 | 05.07.2016 | 02.08.2016 | 8.220 | 726.0 | 32.27 |

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Job No.: CTCE/BBMP/WNo.15/KRIDL/CSR-06/080b/CUBE/2016-17 02.08.2016

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| | |
|---|---|
| * Customer | : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore. |
| * Agency | : **Technical Manager (West),** KRIDL, Bangalore. |
| * Name of the work | : Reserve fund for Emergency work in Dasarahalli Ward No. 15, (Improvements to Prayer ground to Govt. High School near Kalahasthinagar in Ward No. 15 in T. Dasarahalli Sub Division), BBMP, Bangalore. |
| Reference | : BBMP/DZ/AEE/TDSD/PR/2016-17 Dated: 30.06.2016 |
| * Sample ID | : Cement Concrete |
| Size of cubes | : 150mmx150mmx150mm |
| Cross Sectional Area | : 22500 $mm^2$ |
| Technical Reference | : IS: 516-1959 (Reaffirmed 2008) |
| * Grade of Concrete | : $M_{30}$ |
| Compressive Strength as on | : $28^{th}$ day |
| Sample Received on | : 02.08.2016 |

| Sl.No. | * Date of casting | Date of testing | Weight of cube (Kg) | Failure load (KN) | Compressive strength ($N/mm^2$) |
|---|---|---|---|---|---|
| 1 | 05.07.2016 | 02.08.2016 | 8.142 | 713.0 | 31.69 |
| 2 | 05.07.2016 | 02.08.2016 | 8.216 | 699.2 | 31.08 |
| 3 | 05.07.2016 | 02.08.2016 | 8.325 | 728.0 | 32.36 |

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Job No.: CTCE/BBMP/WNo.15/KRIDL/CSR-06/080b/CUBE/2016-17 03.08.2016

## TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

| | |
|---|---|
| *** Customer** | : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore. |
| *** Agency** | : **Technical Manager (West),** KRIDL, Bangalore. |
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| **Reference** | : BBMP/DZ/AEE/TDSD/PR/2016-17 Dated: 30.06.2016 |
| *** Sample ID** | : Cement Concrete |
| **Size of cubes** | : 150mmx150mmx150mm |
| **Cross Sectional Area** | : 22500 $mm^2$ |
| **Technical Reference** | : IS: 516-1959 (Reaffirmed 2008) |
| *** Grade of Concrete** | : $M_{30}$ |
| **Compressive Strength as on** | : $28^{th}$ day |
| **Sample Received on** | : 03.08.2016 |

| Sl.No. | * Date of casting | Date of testing | Weight of cube (Kg) | Failure load (KN) | Compressive strength ($N/mm^2$) |
|---|---|---|---|---|---|
| 1 | 06.07.2016 | 03.08.2016 | 8.186 | 714.9 | 31.77 |
| 2 | 06.07.2016 | 03.08.2016 | 8.345 | 702.6 | 31.23 |
| 3 | 06.07.2016 | 03.08.2016 | 8.261 | 728.4 | 32.37 |

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